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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/330,096	06/11/1999	JUN ENOMOTO	1110-0240P	8973

7590

03/13/2003

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EXAMINER

TOPPIN, CATHERINE J

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/330,096

Applicant(s)

ENOMOTO, JUN

Examiner

Catherine Toppin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Digital Imaging Device with Lens Characteristic Correction Unit.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi et al (US 5818527). As for claim 1, Yamaguchi discloses a digital image shooting device comprising an image forming lens (1), image sensor element (2), data processing unit (4), an image memory (5) and a lens characteristic correction unit for performing (image processor 30B), by using a characteristic of said image forming lens (see column 6, line 37) and a position of a frame image photographed (see column 6, line 43), a process of correcting a deterioration of an image quality derived from said image forming lens upon the digital image data.
4. As for claim 2, Yamaguchi discloses an image shooting device with an image-processing unit that corrects for an optical distortion of the lens. (See column 6, line 37.) The examiner interprets said optical distortion as equivalent to at least one of the claimed chromatic aberration

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of magnification, distortion aberration, defocusing and a decrease in marginal lumination, namely distortion aberration.

5. As for claim 3, Yamaguchi discloses an image shooting device wherein said lens characteristic unit (30B) corrects the deterioration of the image quality before a process of compressing (encoder 28) the digital image data. (See figure 8.)
6. As for claim 4, the examiner interprets the claimed timing of image correction as either before the photographing of the next frame or during the photographing of the next frame onward as inherent within the system in that the claimed sequence of timing of image correction encompasses any time period after the image is formed. Yamaguchi furthermore discloses that the image shooting device stores the digital data of the frame, which is performed the correction in said image memory. (See column 9, lines 43-51.)
7. As for claim 5, the examiner interprets the memory (5) of figure 8 to inherently be either a built in image recording medium or a removable image recording medium.
8. As for claim 6, Yamaguchi discloses an image shooting device according with a display means (27) in which an image which has performed the correction process is displayed on said image display unit (see column 6, lines 1-10.) Furthermore, the digital image data performed the correction process in said lens characteristic correction unit is stored in a memory. (See column 6, lines 57-67.)
9. As for claim 7, Yamaguchi discloses an image of a region larger than a photographic region is formed on said image sensor element in accordance with missing of pixels, which is caused as a result of the correction by said lens characteristic correction unit. (See figure 11 and 12 and column 7, lines 57-65.)

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zimmerman (US 5185667) discloses a device for providing a corrected view of an image comprised of a fisheye lens. Richards (US 5276519) also discloses a system for correcting aberration from an optical unit that comprises a means for correcting lens distortion.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Toppin whose telephone number is (703) 305-8144. The examiner can normally be reached on Monday-Friday 8:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.

CJT
March 10, 2003


WENDY R. GARBER
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